

REMARKS

Claims 1-5, 10-13, 18-20, 24-28, and 34-36 are now pending in the application. Claims 6-9, 14-17, 21-23, 29-32 are cancelled and claims 34-36 are new. Independent claims 1, 10, 18, and 25 are currently amended to include features from the respective cancelled dependent claims and from the specification. Support for the amendments is found in the former dependent claims and the specification at paragraphs [0031], [0036], and [0038]. Claim 10 is also amended to correct an informality. The Examiner is respectfully requested to reconsider and withdraw the rejection in view of the amendments and remarks contained herein.

1. CLAIM OBJECTIONS

Claims 10-17 stand objected to because of an informality. Accordingly, Claim 10, line 1 has been changed to recite – “to support a first structure.” Applicants respectfully request reconsideration of the claims and withdrawal of the objection.

2. REJECTION UNDER 35 U.S.C. § 112

Claims 1-17 and 25-33 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The inclusion of “continuously” in independent claims 1, 10, and 25 is allegedly vague and indefinite. These claims are currently amended to delete “continuously” solely to further prosecution, as Applicant does not agree that the language is vague and indefinite. Accordingly, the rejection is

rendered moot and Applicant respectfully requests reconsideration of the claims and withdrawal of the rejection.

3. REJECTION UNDER 35 U.S.C. § 103 – SODERBERG

Claims 1-33 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Soderberg et al. (U.S. Pat. No. 5,722,646). This rejection is respectfully traversed.

Independent claims 1, 10, 18, and 25 are currently amended to include features from the respective cancelled dependent claims and from the specification. Namely, these claims now recite a bonding pack and its associated features from the former dependent claims and from the specification in paragraphs [0031], [0036], and [0038]. These claims and their associated dependent claims are not obvious in view of Soderberg as the reference does not include all the features of the present claims nor does the reference provide any motivation to a skilled artisan to recreate the present claims. The Soderberg reference fails to suggest or appreciate the selectively positionable stanchions and the bonding pack of the present claims. In addition, the reference provides no motivation to so reengineer the Soderberg apparatus, and in fact, if such modifications were made they each would defeat the operation and goals of the Soderberg apparatus.

3.1 The support actuators of Soderberg are not selectively positionable.

The selectively positionable stanchions of the present claims distinguish the present invention from Soderberg reference. In particular, the plurality of modular stanchions is selectively positionable anywhere along x and y axes relative to the top of

the pallet base. An example is illustrated in Figures 2 and 3, showing an embodiment of the present invention with an arrangement of stanchions. There are no constraints regarding the orientation and position of the stanchions relative to the base or each other.

In contradistinction, the Soderberg apparatus has an actuator mechanism that is received by a (finite) plurality of receiving positions (e.g., apertures) in a support table. That is, Soderberg, by design, expressly limits the location of an actuator mechanism to the defined aperture in the support table, which is unlike the stanchions of the present invention that can be selectively positioned and adhesively secured *anywhere* along the x and y axes of the top surface of the pallet. The Soderberg actuators must be located within an aperture on the support table. In fact, the Soderberg apertures contain the pneumatic supply and addressable bus interconnection to control the actuators, and as such, the actuators in Soderberg are constrained and arranged in a spaced relation as mounted in the apertures in the table portion. Soderberg col. 3, lines 17-20; see also FIGS. 1 and 2 (showing a 7x9 array of actuators). And each actuator unit is adapted for insertion and removal *only* at these individual sites on the table. Soderberg col. 8, lines 60-64.

For instance, the stanchions of the present claims are selectively positionable on the pallet at x and y positions that may correspond to x and y positions *between* the Soderberg apertures. Furthermore, the Soderberg actuators are not moved in the x and y positions at all. Instead, the apertures are filled with actuators, and those actuators which are not being used are set to the retract state (i.e., lowered into/inside the table

using the hydraulic control and/or electrical bus connector between the aperture and actuator). Soderberg col. 6, lines 64-67.

Hence the present invention cannot be obvious in view of the Soderberg reference due to the absence of stanchions that are selectively positionable along x and y axes relative to the top surface of the pallet base. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991) (The prior art reference must teach or suggest all the claim limitations.).

3.2 Disconnecting the Soderberg support actuators from the apertures would defeat the goals of the Soderberg apparatus and render it inoperable.

The Soderberg actuators are necessarily restricted to the locations of the apertures, for the apertures provide the vacuum and air supply lines as well as a bus or network interface for controlling the actuators. Soderberg col. 1, lines 52-55; FIGS. 12-13. And each aperture position has a unique address. Soderberg col. 1, lines 55-62; and col. 11, line 16. Thus, the dynamic tooling system of Soderberg would be inoperable if the actuators were made adhesively securable and selectively positionable along x and y axes. The Soderberg actuators must be fitted within an aperture defined on the table surface to interface with actuator control commands.

In fact, the Soderberg apparatus is *teaching away* from making the actuators selectively positionable in the x and y axes. As stated in the background, variable systems which allow movement of the support stanchions in a horizontal plane provide even further difficulties given that control wires, power wires, and hydraulic or pneumatic or vacuum supply lines are required to also be moveable, resulting in maintenance and

reliability issues. Soderberg col. 1, lines 33-42. Soderberg addresses these problems by providing actuators that connect to apertures having a unique address that further contains the connectors for vacuum and air lines and interface w/ the bus, thus, the actuators do not need to be moved in the x and y axes. Soderberg col. 1, lines 52-62.

The present invention, therefore, cannot be obvious in view of the reference. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959) (If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.)

3.3 There is no teaching, suggestion, or motivation in the art to incorporate a bonding pack as found in the present claims.

The present independent claims include a bonding pack having a shim bonded to the bottom of the stanchion base via a quick-debonding adhesive layer and a quick bonding adhesive layer providing an interfacial joint between the modular stanchion and the pallet base. The Soderberg reference does not teach the use of a bonding pack to secure the actuator to the aperture on the table, nor would use of the bonding pack of the present claims be obvious to a skilled artisan.

The Office Action alleges that it is well known in the art to use various, well known equivalent and commercially available securing means, such as screws, bolts, nails, magnets and adhesive layer to secure one object to another. However, even if a skilled artisan used adhesive to attach the Soderberg actuators to the apertures, the present bonding pack is not obvious. As already discussed herein, the Soderberg

apparatus places an actuator in each aperture, and retracts the apertures not being used into the table. Soderberg col. 6, lines 64-67. Consequently, there is no motivation provided to include a bonding pack with a quick bonding adhesive that allows quick attachment of a stanchion to the pallet and with a quick de-bonding adhesive that allows removal of the stanchion. Whereas, in the present claims, such a bonding pack permits rapid detachment of the stanchion, reloading of the stanchion with a prefabricated bonding pack, and immediate reuse of the stanchion on another pallet base. Paragraph [0039]. Soderberg does not teach or suggest swapping stanchions between pallet bases and provides no motivation to quickly debond the stanchion for such a change over. Thus, the bonding pack of the present claims is not a trivial substitution of one securing means for another, and consequently, the present claims are nonobvious.

Applicant therefore respectfully requests under 37 CFR 1.104(c)(2) that the Examiner provide documentary evidence that the presently claimed bonding pack is a well known and equivalent securing means if the rejection is to be maintained. Alternatively, if the Examiner is relying on personal knowledge to support the finding of what is known in the art, Applicant requests under 37 CFR 1.104(d)(2) that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding.

3.4 Use of a bonding pack in the Soderberg apparatus would render the Soderberg apparatus inoperable.

As previously noted herein, there are elaborate connections between the Soderberg actuator and aperture. Vacuum, air, hydraulic, pneumatic, and electrical bus

connections are integral to the Soderberg apparatus and these connections. Soderberg FIGS. 12 and 13. It is not clear how such connections could be maintained or utilized were a skilled artisan to use a bonding pack to attach the actuator to the aperture in the Soderberg apparatus. Such a substitution would appear to require careful design of a specialized bonding pack that could maintain the various electrical and fluid connections and withstand the fluid pressures (e.g., air, hydraulic fluid, vacuum) involved without failing, interfering with, or interrupting these connections. Moreover, it is not obvious how these connections could or would pass through the adhesive layers and the shim of the presently claimed bonding pack.

The Soderberg apparatus cannot be properly combined with the bonding pack of the present claims as such a combination is contrary to the teachings and operation of Soderberg. *McGinley v. Franklin Sports Inc.*, 262 F.3d 1339, 60 USPQ2d 1001, 1010 (Fed.Cir. 2001) ("If references taken in combination would produce a 'seemingly inoperative device,' we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.").


In sum, the present claims are not obvious in view of Soderberg and generally recognized securing means in the art. The combination presented does not teach or suggest selectively positionable stanchions or the bonding pack. In addition, there is no motivation provided by Soderberg for a skilled artisan to adapt the apparatus to make the stanchions selectively positionable or attached via a bonding pack. Applicants respectfully request reconsideration of the claims and withdrawal of the rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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